

## APS Management Action Plan: Leutl Beam Stop Follow-up

Item #	Description	Accountable Individual	Due Date	Completion Date	Notes
1	<b>Develop comprehensive Management Action Plan designed to resolve shortcomings and to prevent future incidents with Radiation Safety Systems</b>	Gibson	8/31/2004		This item is to develop the plan outlined on the lines below
2	<b>Immediate incident follow-up</b>	Gerig	8/13/2004	8/16/2004	
3	Develop and Implement a general <b>Incident reporting and corrective action</b> policy and procedure				
4	<b>Define, identify, and categorize all Radiation Safety Systems</b> in beamlines, front-ends, and accelerators. Assign QA consequence levels to each component, and risk levels to different types of work (design, installation, maintenance, engineering change, validation).	Carwardine			Definition of categories and first cut at populating the list is due 8/23/04
5	Develop APS-wide policies and procedures for <b>design and engineering changes</b> of Radiation Safety Systems				
6	Develop <b>work processes</b> for installation and maintenance that is consistent with APS policies and equipment classification. Develop guidelines and procedures for performing routine tasks on Radiation Safety Systems.				
7	Develop <b>validation</b> procedures, and clarify validation process				
8	Define <b>roles &amp; responsibilities</b> associated with Radiation Safety Systems				
9	<b>Communicate</b> policy, procedure, and expectations of employees and management, through training, employee meetings, and on-going education.				
10	Compile <b>documentation</b> for all Radiation Safety Systems				

# RADIATION SAFETY SYSTEMS

## Action Items

Task No.	Description	Accountable Individual	Individual(s) working on task	Due Date	Completion Date	Notes
<b>2</b>	<b>Immediate Follow-Up</b>					
2.1	Submit Leuti incident report to ALD	Gerig	Gerig,	8/13/2004	8/13/2004	
2.2	Audit management response to 2-BM incident of Aug 2002, with response to ALD	ESH Coordinators	ESH Coordinators	8/13/2004	8/13/2004	
2.3	Implement a work suspension on all critical components until satisfactory policies are in place (Essential work can be approved with DD approval)	Gerig, Ruzicka		7/22/2004	7/22/2004	
<b>3</b>	<b>Incident Corrective Action Plan</b>					
3.1	Develop a general incident reporting and corrective action plan	Hislop		10/31/2004		
<b>4</b>	<b>Listing and Categorization of Radiation Safety Systems</b>					
4.1	Define, identify, and categorize all Radiation Safety Systems in beamlines, front-ends, and accelerators. Assign QA consequence levels to each component, and risk levels to different types of work (design, installation, maintenance, engineering change, validation).	Hawkins	Hawkins		9/24/2004	8/23/2004 -- Hawkins delivered to OPS Directorate 9/21/04 -- Feedback from DDs due to M. Gibson
4.1.1	Hawkins present draft to Ops-Dir			8/23/2004	8/23/2004	
4.1.2	Feedback from DDs due to M. Gibson			9/21/2004	9/21/2004	
4.2	Implement database of all Radiation Safety Systems and related information, each component having a unique serial number	CCSM				On hold till 4.1 is complete
<b>5</b>	<b>Engineering Process</b>					
5.1	Approve APS Design Review Procedure	ALD, DDs	Gerig, Ruzicka, Gluskin		9/14/2004	? Ruzicka will make final changes ? S. Davey drafting announcement for ALD approval -- Info to be sent by 9/23/04
5.1.1	Final Draft Delivered to M. Gibson			8/17/2004	8/17/2004	
5.1.2	Approval and Distribution			9/14/2004	9/14/2004	S. Davey has been assigned responsibility to review any future revisions
5.2	Add to Design review checklists that shutters and beam stops incorporate indelible markings of functional states (e.g. 'open,' 'closed')	Gerig		8/17/2004	8/17/2004	It is incorporated into procedure in the charge to the safety committee
<b>6</b>	<b>Work Process</b>					
6.1	Implement interim APS-wide policy for work on Radiation Safety Systems to apply to work performed during the Aug/Sept 2004 shutdown.	DDs		8/25/2004	8/25/2004	done
6.2	Apply labels identifying Radiation Safety Systems.	CCSM	Ramanathan		12/1/2004	
6.3	Develop Draft APS Radiation Safety Systems work policy and procedure	Noonan		10/1/2004	on-going	
6.4	Approve APS Radiation Safety Systems work policy and procedure	ALD, DDs		11/5/2004	on-going	

# RADIATION SAFETY SYSTEMS

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6.5	Develop pre-work and post-work checklists for all work performed on Radiation Safety Systems.	Noonan, CCSM			on-going	
6.6	Modify work request system to trigger additional approvals and work processes for Radiation Safety Systems. This will depend on the category of the component to be worked on and the type of work to be performed.	Ramanathan	Mohan		on-going	
6.7	Incorporate Critical Component Work Permit into electronic work request system.	Ramanathan	Mohan		on-going	
<b>7</b>	<b>Validation Process</b>					
7.1	Label functional states (e.g. 'open,' 'closed') for all existing shutters and beam stops where appropriate	CCSM		on-hold	on-hold	?Need to clarify whether this would be possible and not lead to additional mistakes ?Need to discuss in "Policy of Work" Task No. 6.4
7.2 & 8.2	Assign responsible individual(s) authorized to perform independent verifications	DDs	DDs	by next shut-down		
<b>8</b>	<b>Assignment of Responsibilities</b>					
8.1	Assign responsible individuals for each safety-critical equipment	DDs	DDs	by next shut-down		
8.2 & 7.2	Assign responsible individual(s) authorized to perform independent verifications	DDs	DDs	by next shut-down		
8.3	Resolve conflicts on interfaces and responsibilities between ASD SI Group, ASD Vacuum Group, and XFD Engineering Group for front-end and beamline shutters.		on-going	9/28/2004		VAC and XFE interface defined
8.4	Define Role of CCSM	Ruzicka				Will be identified in policy when it is developed
<b>9</b>	<b>Communication</b>					
9.1	Implement a single location (eg webpage) for Radiation Safety Systems where employees can go to get the official list of controlled components, policies, procedures, drawings, etc	Gerig to start, then CCSM				Will be part of the Safety Web Pages and will include drawings
9.2	Hold all-division/all-hands meetings where leutl event and new policies & procedures are discussed.	ALD, DDs		9/28/2004	9/28/2004	Hilsop and Gibson will meet to structure Mtg. (topics will include work planning execution)
9.3	Release document to APS employees describing the leutl incident and the resulting Management Action Plan.	DDs		9/28/2004		Will be released at the all-hands mtg.
9.4	Implement periodic training for all employees that work on safety-controlled devices. Training will provide information on what is considered a safety-controlled device, QA rigor applied to work processes, responsibilities of employees and management. Make training mandatory on periodic basis (eg every 6 months).	Carwardine/Noonan		12/1/2004		

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Task No.	Description	Accountable Individual	Individual(s) working on task	Due Date	Completion Date	Notes
10	<b>Documentation</b>					
10.1	Define minimum documentation requirements for Radiation Safety Systems (eg engineering drawings, procedures, technical description)	CCSM				
10.2	Audit existing documentation for Radiation Safety Systems against newly defined requirements	CCSM				
10.3	Develop missing documentation, collate documentation packages for easy reference and easy access.	DDs				
10.4	Update APS QAPP to incorporate policies and process for Radiation Safety Systems	Hislop		1/1/2005		
10.5	Update and centralize all policies deleting those that are no longer active	Davey			on-going	?9/21/04 - Status Report due from S. Davey